## DETAILED ACTION

### *Status of Application*

Claims 1 and 6-12 are pending and presented for examination. Claims 2-5 are withdrawn by the applicant.

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

***1.*** The information disclosure statement (IDS) submitted on 4/14/06 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Specification*

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

**Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (US, 5,590,387 hereinafter A1) in view of Amiet (US 3,617,253 hereinafter A2) and Dunkley (US 4,212,736 hereinafter A3).

Schmidt (A1) teaches a method of making a metal powder. Therefore its product of a metal powder is inherent as a result of the process. The process comprises a dispersion medium composed of water and/or a polar organic solvent, metal powder particles, and an organic compound capable of being adsorbed on the surface of the metal particles (col. 9, li. 46-63). The dispersion medium is later removed by drying (col. 12, li. 7-9). Furthermore, the starting metal particles are less than 100 nm in size

(col. 3, li. 50-53). These teachings correspond to sections 1(a), 1(b) and 6(a) of the instant application.

In addition, Amiet (A2) teaches apparent density to be a result effective variable and Dunkley (A3) teaches water content to be a result effective variable. Put another way, they teach apparent density and water content to be art recognized result effective variables. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify these variables. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed ranges through process optimization, since it has been held that there the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routin skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980). This corresponds to sections 1(c), 1(d), 6(b) and 6(c) of the instant application.

Schmidt (A1) discloses a wide range for the weight percent of carbon content in the organic compound which anticipates the 0.1-20 wt% range of claims 9 and 10 (col. 5, li. 38-46).

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (A1). A comparison of the size of the metal powder (in micrometers) is shown below.

| Instant claims (7 and 8) | Schmidt (A1) | Anticipated Range |
|---|---|---|
| 1-100 | 1-3 | 1-3 |

The anticipated range is between 1-3 micrometers.

4. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (A1). A comparison of the metal in the metal particles is shown below.

| Instant claims (11 and 12) | Schmidt (A1) | Anticipated Elements |
|---|---|---|
| Cr, Mn, Fe, Co, Ni, Cu, Zn, Mo, Ru, Rh, Pd, Ag, Sn, W, Ir, Pt, Au | B, Al, Si, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, La, Y, Fe, Co, Ni | Cr, Mo, W, Fe, Co, Ni |

In addition, Schmidt (A1) teaches that these elements may be alone or in combination with one another (col. 5, li. 1-7). This would overlap with the alloy and metal composites of claims 11 and 12.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Chen whose telephone number is 571-270-3590. The examiner can normally be reached on Monday-Friday 8:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CC

/Vickie Kim/
Supervisory Patent Examiner, Art Unit 4116